

Claims

1. A gas flow distributor for a lateral airbag module for the targeted distribution of a gas flow emerging from the outflow openings of a gas generator in a gas bag which is to be inflated by the gas generator, characterized in that the gas flow distributor is formed by a dimensionally stable holder (1, 3, 5) surrounding the gas generator at least in the region of the outflow openings.
2. The gas flow distributor as claimed in claim 1, characterized in that the holder (1, 3, 5) consists of such a dimensionally stable material that it is not deformed by the gas flow emerging from the gas generator.
3. The gas flow distributor as claimed in claim 2, characterized in that the holder (1, 3, 5) consists of metal or a diecasting.
4. The gas flow distributor as claimed in one of the preceding claims, characterized in that the holder (1, 3, 5) is designed to hold a tubular gas generator (6).
5. The gas flow distributor as claimed in claim 4, characterized by a holding region (10) of the holder (1, 3, 5) for surrounding a tubular gas generator (6).
6. The gas flow distributor as claimed in claim 5, characterized in that the holding region (10) is of tubular design.

7. The gas flow distributor as claimed in claim 6, characterized in that the holding region (10) is designed in cross section as a continuous curve, in particular is of circular or polygonal design.

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8. The gas flow distributor as claimed in claim 6 or 7, characterized in that the holding region (10) is of essentially hollow-cylindrical design.

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9. The gas flow distributor as claimed in one of claims 4 to 8, characterized in that the holder (1, 3, 5) is designed to let a gas flow into a gas bag to be inflated along the circumferential surface of the holding region (10), in particular in the direction of

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extent of the tubular gas generator (6).

10. The gas flow distributor as claimed in one of the preceding claims, characterized in that the holder (1, 3, 5) has outlet openings (14a, 14b, 15, 18, 19, 101, 102) through which gas which has flowed into the interior of the holder (1, 3, 5) can emerge from the gas generator (6) and can flow into the gas bag to be inflated.

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11. The gas flow distributor as claimed in claims 6 and 10, characterized in that at least one outlet opening (14a, 14b, 15, 18, 19) are provided in the casing of the tubular holding region (10).

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12. The gas flow distributor as claimed in claim 10 or 11, characterized in that the size of the outlet opening (14a, 14b, 15, 18, 19, 101, 102) can be set.

13. The gas flow distributor as claimed in one of claims 10 to 12, characterized in that the outlet opening (15) is at least partially closed by a covering (150) which is opened by the gas flow emerging from the gas generator.

14. The gas flow distributor as claimed in claim 9 and one of claims 10 to 13, characterized in that the at least one outlet opening (14a, 14b, 15, 18, 19, 101, 102) is arranged and designed to conduct the gas flow emerging from the gas generator (6) along the circumferential surface of the holding region (10), in particular in the direction of extent of the gas generator (6).

15. The gas flow distributor as claimed in one of the preceding claims, characterized by a design of the holder (1, 3, 5) such that gas flowing out of a gas generator (6) held in the holding region (10) is at least in part initially reflected against an inner wall (10b) of the holding region (10) before it emerges from the holder (1, 3, 5).

16. The gas flow distributor as claimed in one of claims 4 to 15, characterized in that the inner wall (10b) of the holding region (10) is spaced apart from the gas generator being held, at least in the region of the outflow openings thereof.

17. The gas flow distributor as claimed in one of the preceding claims, characterized in that the holder (1, 3, 5) can be connected directly to a supporting part of a motor vehicle.

18. The gas flow distributor as claimed in one of claims 1 to 16, characterized in that the holder (1, 3, 5) can be connected to a supporting part of a motor vehicle indirectly via a further subassembly, for example a subassembly of the airbag module.

19. The gas flow distributor as claimed in one of the preceding claims, characterized in that it serves as a generator support and has a connecting region (20) for connecting the generator support to a supporting part of a motor vehicle.

20. The gas flow distributor as claimed in claim 19, characterized in that the connecting region (20) has fastening points (23) for fastening the generator support (1) to a further subassembly.

21. The gas flow distributor as claimed in either of claims 20 and 21, characterized in that the connecting region (20) is formed by a flange.

22. The gas flow distributor as claimed in claim 21, characterized in that the flange protrudes from the holding region (10) of the generator support (1).

23. The gas flow distributor as claimed in one of claims 19 to 22, characterized in that the holding region (10) and the connecting region (20) of the generator support (1) are of single-piece design.

24. The gas flow distributor as claimed in one of the preceding claims, characterized in that at least one region of the holder is designed as an impact element (3, 5), and at least one gas-guiding duct (100)

- 18 -

for guiding the gas flow runs between the impact element (3, 5) and the gas generator (6).

25. The gas flow distributor as claimed in claim 24,
5 characterized in that the gas-guiding duct (100) runs essentially between the outside of the gas generator (6) and the inside of the impact element (3, 5).

26. The gas flow distributor as claimed in claim 24 or
10 25, characterized in that the gas-guiding duct (100) runs essentially between the outside of a region of the holder that surrounds the gas generator (6) and the inside of the impact element (3, 5).

15 27. The gas flow distributor as claimed in one of claims 24 to 26, characterized in that the impact element (3, 5) has an essentially circular cross section.

20 28. The gas flow distributor as claimed in claim 27, characterized in that the tube axis (R) of a gas generator designed as a tubular gas generator (6) and the cross-sectional axis of the impact element (3, 5) are spaced apart from each other.

25 29. The gas flow distributor as claimed in one of claims 24 to 28, characterized in that the impact element (5, 51) is formed as a single piece with a further region of the holder (50, 52).

30 30. The gas flow distributor as claimed in one of claims 24 to 29, characterized in that the gas-guiding duct (100) essentially has a circular ring-shaped and/or a crescent-shaped cross section.

31. The gas flow distributor as claimed in one of the preceding claims, characterized in that gas outlet regions (101, 102) of the gas-guiding duct (100) and/or the outlet openings (14a, 14b, 15, 18, 19) of the holder (1) lead into at least one gas bag.

32. The gas flow distributor as claimed in claim 31, characterized in that the gas outlet regions (101, 102) of the gas-guiding duct (100) and/or the outlet openings (14a, 14b, 15, 18, 19) of the holder (1) lead in each case into different chambers of the gas bag and/or into different gas bags.

33. The gas flow distributor as claimed in one of the preceding claims, characterized in that the impact element (3, 5) and/or the holder (1) serves to separate two gas bag chambers.

34. The gas flow distributor as claimed in one of the preceding claims, characterized in that at least two gas bags are attached to the impact element (3, 5) and/or the holder (1) and in each case at least one gas-guiding duct (100) and/or at least one outlet opening (14a, 14b, 15, 18, 19) leads into one gas bag in each case.

35. The gas flow distributor as claimed in claim 34, characterized in that a separating gap running between two gas bags runs in the region of the impact element (3, 5) and/or the holder (1).

36. The gas flow distributor as claimed in claim 35, characterized in that the separating gap can be braced in a gastight manner via the impact element (3, 5) and/or the holder (1).

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37. The gas flow distributor as claimed in one of the preceding claims, characterized in that the function of the impact element (3, 5) and/or of the holder (1) is maintained during plastic deformation.

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38. The gas flow distributor as claimed in one of the preceding claims in a lateral airbag module.

39. A lateral airbag module having

- 15 - a gas generator for inflating a gas bag, and
- a gas flow distributor according to one of the preceding claims.

20 40. The lateral airbag module as claimed in claim 39 having a gas bag which can be inflated by the gas generator, the holding region (10) of the gas flow distributor (1) being arranged within the gas bag.